UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

August 4, 2006

R. T. Ridenoure
Vice President
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
P.O. Box 550
Fort Calhoun, NE 68023-0550

SUBJECT: FORT CALHOUN STATION - NRC INTEGRATED INSPECTION REPORT 05000285/2006003

Dear Mr. Ridenoure:

On June 30, 2006, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Fort Calhoun Station. The enclosed integrated inspection report documents the inspection findings, which were discussed on July 7, 2006, with Mr. Jeff Reinhart, Site Director, and other members of your staff.

The inspections examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

This report documents three NRC-identified findings and one self-revealing finding that were evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has also determined that three violations are associated with these issues. These violations are being treated as noncited violations (NCVs), consistent with Section VI.A of the Enforcement Policy. The NCVs are described in the subject inspection report. If you contest the violations or significance of the NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011-4005; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the Fort Calhoun Station facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, and its enclosure, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/RA/

David N. Graves, Chief
Project Branch E
Division of Reactor Projects

Docket: 50-285
License: DPR-40

Enclosure:
NRC Inspection Report 05000285/2006003
w/Attachment: Supplemental Information

cc w/Enclosure:
Joe I. McManis, Manager - Licensing
Omaha Public Power District
Fort Calhoun Station FC-2-4 Adm.
P.O. Box 550
Fort Calhoun, NE 68023-0550

David J. Bannister
Manager - Fort Calhoun Station
Omaha Public Power District
Fort Calhoun Station FC-1-1 Plant
P.O. Box 550
Fort Calhoun, NE 68023-0550

James R. Curtiss
Winston & Strawn
1700 K Street NW
Washington, DC 20006-3817

Chairman
Washington County Board of Supervisors
P.O. Box 466
Blair, NE 68008

Julia Schmitt, Manager
Radiation Control Program
Nebraska Health & Human Services
Dept. of Regulation & Licensing
Division of Public Health Assurance
301 Centennial Mall, South
P.O. Box 95007
Lincoln, NE 68509-5007

Daniel K. McGhee
Bureau of Radiological Health
Iowa Department of Public Health
Lucas State Office Building, 5th Floor
321 East 12th Street
Des Moines, IA 50319

Chief, Radiological Emergency Preparedness Section
Kansas City Field Office
Chemical and Nuclear Preparedness and Protection Division
Dept. Of Homeland Security
9221 Ward Parkway
Suite 300
Kansas City, MO 64114-3372

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J. Lamb, OEDO RIV Coordinator
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DMB (IE35)

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| RIV:RI:DRP/E | SRI:DRP/E | C:DRS/EB1 | C:DRS/OB | E:DRS/EB2 |
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| LMWilloughby | JDHanna | JAClark | ATGody | LJSmith |
| ***E-DNGraves*** | ***E-DNGraves*** | ***CJPaulk for*** | ***/RA/*** | ***CFO'Keefe for*** |
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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION IV**

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|---|---|
| Docket: | 50-285 |
| License: | DPR-40 |
| Report: | 05000285/2006003 |
| Licensee: | Omaha Public Power District |
| Facility: | Fort Calhoun Station |
| Location: | Fort Calhoun Station FC-2-4 Adm.<br>P.O. Box 399, Highway 75 - North of Fort Calhoun<br>Fort Calhoun, Nebraska |
| Dates: | April 1 through June 30, 2006 |
| Inspectors: | J. Hanna, Senior Resident Inspector<br>L. Willoughby, Resident Inspector<br>G. Werner, Senior Project Engineer<br>R. Lantz, Senior Emergency Preparedness Inspector<br>G. Pick, Senior Reactor Inspector, Engineering<br>S. Alferink, Reactor Inspector, Engineering<br>K. Clayton, Operations Engineer |
| Approved By: | David N. Graves, Chief, Project Branch E<br>Division of Reactor Projects |

## SUMMARY OF FINDINGS

IR 05000285/200603; 04/01/2006 - 06/30/2006; Fort Calhoun Station, Integrated Resident and Regional Report; Adverse Weather Protection, Fire Protection, Operator Performance During Nonroutine Evolutions and Events, Event Follow-up.

The report covered a 3-month period of inspections by resident inspectors and announced inspections by a senior project engineer, a senior emergency preparedness inspector, a senior reactor inspector, a reactor inspector, and an operations engineer. Four Green findings, of which three were noncited violations, were identified. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the significance determination process does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC-Identified Findings and Self-Revealing Findings

Cornerstone: Initiating Events

- Green. A noncited violation was identified for failure of operators to follow an abnormal operating procedure as required by Technical Specification 5.8.1.a. This failure resulted in the station not identifying that loose material had the potential to become airborne during high winds and potentially cause a loss of off-site power. This finding has a crosscutting aspect in the area of problem identification and resolution because the licensee failed to identify the condition despite numerous opportunities to do so.

  This finding was determined to be greater than minor in that it affected the "Protection Against External Factors" attribute of the Initiating Events cornerstone. Further, this condition could also reasonably be viewed as a precursor to a significant event. The inspectors evaluated this finding using Manual Chapter 0609, Appendix A and determined that it was of very low safety significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. This condition has been entered into the licensee's corrective action program as Condition Report 200602454 (Section 1RO1).

- Green. A self-revealing finding was identified for inadequate operator control of plant parameters, which resulted in an unplanned reactor trip during testing. The cause of the finding is related to the crosscutting element of human performance in that the operator's performance directly led to the plant transient.

  The finding was greater than minor because it had an actual impact of tripping the reactor, which is a precursor to a significant event. The performance deficiency was also similar to example 4.b in Inspection Manual Chapter 0612, Appendix E. The finding, which is under the Initiating Events cornerstone, was of

very low safety significance because it did not contribute both to the likelihood of a reactor trip and that mitigation equipment would not be available. This condition has been entered into the licensee's corrective action program as Condition Report 200500773 (Section 4OA3).

Cornerstone: Mitigating Systems

- Green. A noncited violation of Technical Specification 5.8.1.c, Fire Protection Program Implementation, was identified for the failure to ensure that all fire barriers protecting safety-related areas were functional. Specifically, Fire Door 1007-10 between Fire Area 20.1 and Fire Area 20.4 was chained opened and would have allowed flame propagation between Corridor 26 and Room 61.

  This finding was more than minor since it was associated with the protection against external factors attribute of the mitigating systems cornerstone. Using the Significance Determination Process, Manual Chapter 0609, Appendix F, the finding was determined to be in the Fire Confinement category because the fire barrier separated one fire area from another. A high degradation rating was assigned because the fire barrier was defeated by chaining open the fire door. The finding was characterized as having very low safety significance. Although the exposed fire area (Corridor 26) contains safe shutdown equipment, the exposing fire area (Room 61) does not. Therefore, a fire in Room 61 that spreads to Corridor 26 would not affect safe shutdown. The same systems and components available to achieve safe shutdown in the case of a fire in Corridor 26 will be available to perform the safe shutdown for a fire that spreads from Room 61 into Corridor 26. This condition has been entered into the licensee's corrective action program as Condition Report 200602029 (Section 1R05).

Cornerstone: Barrier Integrity

- Green. A noncited self-revealing violation of 10 CFR Part 50, Appendix B, Criterion XVI, was identified for the failure to ensure that conditions adverse to quality are promptly identified and corrected. Specifically, a licensed operator and radiation protection technician failed to promptly identify and correct Personnel Access Lock inner door equalizing valve leakage, a condition adverse to quality that affected containment integrity and resulted in a technical specification violation. The finding has crosscutting aspects in the corrective action program component of the problem identification and resolution crosscutting area in that the inner Personnel Access Lock door equalizing valve leakage was not promptly identified and corrected.

  The finding was considered self-revealing since the inner door equalizing valve leakage revealed itself when contamination smears were blown off the step-off pad after opening the outer door. The finding was more than minor since it is associated with the reactor safety barrier cornerstone attribute to maintain functionality of containment. The finding also affected the cornerstone objective by not providing reasonable assurance that the physical design barrier protected the public from radionuclide releases caused by events when the outer Personnel Access Lock door was open. Using the Significance Determination

Process, Inspection Manual Chapter 0609 Appendix A, the finding represented an actual bypass of the reactor containment therefore Inspection Manual Chapter 0609 Appendix H was used to evaluate the finding. In Inspection Manual Chapter 0609, Appendix H, the finding was classified as Type B, since there was no impact on core damage frequency but did potentially contribute to large/early release frequency. The initial screening determined the finding to be of very low safety significance (Green) since it was not related to a containment structure, system, or component defined in Appendix H, Table 4.1. This condition has been entered into the licensee's corrective action program as Condition Report 200601444 (Section 1R14).

B. Licensee-Identified Violations

Violations of very low safety significance, which were identified by the licensee, have been review by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and corrective action tracking numbers (condition report numbers) are listed in Section 4OA7 of this report.

## REPORT DETAILS

Summary of Plant Status

The unit began this inspection period in Mode 1 at full rated thermal power and operated at 100 percent until April 10, 2006, when power was reduced to 96 percent due to a required Technical Specification 2.0.1 entry associated with the Personnel Access Lock (PAL). Later, on April 10, reactor power was increased to 100 percent once repairs were affected. On April 29, the plant was shut-down in order to repair a reactor coolant pump seal. On May 9, the unit was returned to 100 percent power, where it remained until the end of the inspection period.

## 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Readiness For Seasonal Susceptibilities

a. Inspection Scope

The inspectors completed a review of the licensee's readiness of seasonal susceptibilities involving extreme high temperatures. The inspectors: (1) reviewed plant procedures, the Updated Safety Analysis Report (USAR), and Technical Specifications to ensure that operator actions defined in adverse weather procedures maintained the readiness of essential systems; (2) walked down portions of the two systems listed below to ensure that adverse weather protection features were sufficient to support operability, including the ability to perform safe shut-down functions; (3) evaluated operator staffing levels to ensure the licensee could maintain the readiness of essential systems required by plant procedures; and (4) reviewed the corrective action program (CAP) to determine if the licensee identified and corrected problems related to adverse weather conditions.

- June 22, 2006: Diesel Generator 1
- June 22, 2006: Raw Water System

Documents reviewed by the inspectors included:

- MM-ST-DG-0001, “Diesel Generator DG-1 Inspection,” Revision 53, dated May 17, 2006

- Ch-AD-0048, “Environmental Inspection For Biofouling Organisms,” Revision 2, dated October 4, 2005.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

.2 Readiness For Impending Adverse Weather Conditions

a. Inspection Scope

The inspectors completed a review of the licensee's readiness for impending adverse weather involving severe thunderstorms, tornadoes, and high winds. The inspectors: (1) reviewed plant procedures, the USAR and Technical Specifications to ensure that operator actions defined in adverse weather procedures maintained the readiness of essential systems; (2) walked down portions of the Protected Area and outside structures to ensure that material that had a potential to become a missile was properly secured; and (3) reviewed plant modifications and procedure revisions to determine if recent facility changes challenged plant operations. The inspectors completed one sample.

b. Findings

Introduction. The inspectors identified a Green noncited violation (NCV) for failure of operators to follow an abnormal operating procedure as required by Technical Specification 5.8.1.a. This failure resulted in the station not identifying that loose material had the potential to become airborne during high winds and potentially cause a loss of off-site power.

Description. On June 6, 2006, prior to the onset of severe weather, the inspectors performed a walkdown of the Protected Area. The inspector used licensee procedure FCSG-1, "Duty Assignments," Revision 4, Section 5.1.3, which specified the requirements for materials stored onsite that had the potential of becoming missiles. Specifically, the procedure stated "The Shift Manager shall ensure materials stored onsite, having the potential of becoming missiles, are adequately stored daily." The procedure further stated, "Stored material shall be adequately anchored, stored in a suitable enclosure or moved to an area away from power lines and substation facilities. Specifically . . . Loose pieces of sheet metal or other lightweight conductive material of 10 gage weight (1/8 inch thickness) or less, and greater than 8 feet in length or diagonally across."

The inspectors identified four groups of objects that exceeded the licensee's requirements, thus requiring the items to be secured. These items included; (1) flat metal sheeting approximately 4 feet by 10 feet; (2) two strips of metal banding material in excess of 8 feet; (3) a piece of sheet metal and a flat sheet of metal mesh; and (4) two piles of metal flashing similar to residential siding. The inspectors immediately informed the on-duty Shift Manager, and prompt action was taken to remove or secure the materials. The inspectors noted that at least two groups of material had been improperly stored as early as April 6, 2006. Further the inspectors noted that four Severe Thunderstorm Watches and two Severe Thunderstorm Warnings had been

issued for Washington County, Nebraska, since May 1, 2006. Licensee Abnormal Operating Procedure AOP-01, "Acts of Nature," Revision 20 requires that "If weather conditions allow, then perform a visual inspection of the Protected Area and switchyard for potential wind generated missiles."

Analysis. The inspectors determined that the failure to adequately follow the adverse weather procedure and equipment guidance was a performance deficiency. This finding was determined to be greater than minor in that it affected the "Protection Against External Factors" attribute of the Initiating Events cornerstone. Further, this condition could also reasonably be viewed as a precursor to a significant event. The inspectors evaluated this finding using Manual Chapter 0609, Appendix A, and determined that it was of very low safety significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. This finding has a crosscutting aspect in the area of problem identification and resolution because the licensee failed to identify the condition despite numerous opportunities to do so.

Enforcement. Technical Specification 5.8.1.a requires, in part, that written procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, 1978. Regulatory Guide 1.33, Appendix A, requires, in part, written procedures for Acts of Nature (e.g., tornado, flood, dam failure, earthquakes). Procedure AOP-01, "Acts of Nature," Revision 20, requires that "If weather conditions allow, then perform a visual inspection of the Protected Area and switchyard for potential wind generated missiles." Contrary to the above, on April 6, 2006, during a tornado watch declared by the National Weather Service for Washington County, Nebraska, which caused entry into AOP-01, the operators failed to identify potential missile hazzards. This violation of Technical Specification 5.8.1.a, is being treated as a noncited violation, consistent with Section VI.A of the Enforcement Policy (NCV 05000285/2006003-01). This violation was entered into the licensee's corrective action program as Condition Report (CR) 200602454.

1R04 Equipment Alignments (71111.04)

.1 Partial Equipment Walkdowns

a. Inspection Scope

The inspectors: (1) walked down portions of the three risk important systems listed below and reviewed plant procedures and documents to verify that critical portions of the selected systems were correctly aligned; and (2) compared deficiencies identified during the walkdown to the licensee's Updated Safety Analysis Report and Corrective Action Program to ensure problems were being identified and corrected. Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed three samples.

- May 1, 2006, Safety Injection 1A Shutdown Cooling while Safety Injection 1B was in service to support shutdown cooling

- June 21, 2006, Diesel Generator 1 while Diesel Generator 2 was out of service for maintenance and testing
- June 22, 2006, Component Cooling Water pumps AC-3A and AC-3C while AC-3B was out of service for maintenance and testing

b. Findings

No findings of significance were identified.

.2 Complete Walkdown (71111.04S)

a. Inspection Scope

The inspectors: (1) reviewed plant procedures, drawings, the USAR, and Technical Specifications, to determine the correct alignment of the auxiliary feedwater system; (2) reviewed outstanding design issues, operator workarounds, and Updated Safety Analysis documents to determine if open issues affected the functionality of the auxiliary feedwater system; and (3) verified that the licensee was identifying and resolving equipment alignment problems. Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Quarterly Fire Inspection Tours

a. Inspection Scope

The inspectors walked down the six plant areas listed below to assess the material condition of active and passive fire protection features and their operational lineup and readiness. The inspectors: (1) verified that transient combustibles and hot work activities were controlled in accordance with plant procedures; (2) observed the condition of fire detection devices to verify they remained functional; (3) observed fire suppression systems to verify they remained functional and that access to manual actuators was unobstructed; (4) verified that fire extinguishers and hose stations were provided at their designated locations and that they were in a satisfactory condition; (5) verified that passive fire protection features (electrical raceway barriers, fire doors, fire dampers, steel fire proofing, penetration seals, and oil collection systems) were in a satisfactory material condition; (6) verified that adequate compensatory measures were established for degraded or inoperable fire protection features and that the compensatory measures were commensurate with the significance of the deficiency; and (7) reviewed the USAR to determine if the licensee identified and corrected fire protection problems.

- May 10, 2006, Valve Area III (Fire Area 20.4)
- May 15, 2006, Upper Electrical Penetration Room (Fire Area 57W)
- June 1, 2006, Control Room (Fire Area Control Room Complex, Rooms 72, 73, 74, 77, and 79)
- June 2, 2006, Tendon Gallery
- June 2, 2006, Charging Pump Area (Fire Area 10)
- June 19, 2006, Turbine Building Basement Area (Fire Area 46.2)

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed six samples.

b. Findings

Fire Barrier Separating Corridor 26 (Fire Area 20.1) and Room 61 (Fire Area 20.4)

Introduction. A Green NCV of Technical Specification 5.8.1.c was identified for the failure to ensure that all fire barriers protecting safety-related areas were functional. Specifically, Fire Door 1007-10, between Fire Area 20.1 and Fire Area 20.4 was chained opened and would have allowed flame propagation between Corridor 26 and Room 61 (Chemical and Volume Control System Ion Exchanger Valve Room).

Description. On May 10, 2006, Fire Door 1007-10 was chained opened to support maintenance in Room 61. The proper fire compensatory measures had been implemented to support the maintenance but were closed out when the maintenance was completed. Subsequently, the inspectors found Fire Door 1007-10, a fire barrier to Room 61, chained opened with no fire watch assigned. This door, a 3-hour rated fire barrier, separated Fire Area 20.1 (Corridor 26) from Fire Area 20.4 (Room 61). At the time of discovery, small amount of transient combustibles were present in Room 61 but were below the administrative limits. There were no transient combustibles identified in Corridor 26 adjacent to Room 61.

Analysis. The inspectors evaluated the safety significance of the finding. This finding affected the mitigating systems cornerstone and was considered more than minor since it affected the cornerstone attribute of Protection Against External Factors. Based on Manual Chapter 0609, Appendix F, the finding was determined to be in the fire confinement category because the degraded fire barrier separated one fire area from another. The inspectors assigned a high degradation rating since the fire barrier was defeated by chaining open the fire door. The finding affected the ability to reach and maintain cold shutdown conditions due to cables located in Corridor 26. In addition, there was no automatic gaseous or water-based fire suppression systems in the fire areas.

The exposed fire area, Corridor 26, does contain safe shutdown targets but the exposing fire area, Room 61, does not contain any. Therefore, the same systems and components available to achieve safe shutdown in the case of a fire in Corridor 26 will be available to perform the safe shutdown for a fire that spreads from Room 61 into Corridor 26. Therefore, the potential spread of a fire between these two areas has a very low safety significance and screens as Green.

Enforcement. Technical Specification 5.8.1.c requires, in part, that written procedures shall be established, implemented, and maintained for implementation of the Fire Protection Program. Procedure SO-G-102, "Fire Protection Program Plan," Revision 7, was the governing document for all fire protection program plan implementing procedures and references Procedure SO-G-103, "Fire Protection Operability Criteria and Surveillance Requirements," Revision 20, which implements fire protection requirements. Procedure SO-G-103, Attachment 7.5, requires, in part, that all fire barriers protecting safety-related areas shall be functional. Contrary to the above, the licensee failed to ensure that all fire barriers protecting safety-related areas were functional. Specifically, on May 10, 2006, Fire Door 1007-10 was rendered nonfunctional by chaining the door open with no compensatory measures for approximately 45 minutes. This fire door separates Fire Area 20.1 (Corridor 26) from Fire Area 20.4 (Room 61) and would have allowed flame propagation from Room 61 to Corridor 26. This violation of Technical Specification 5.8.1.c is being treated as a NCV, consistent with Section VI.A of the NRC Enforcement Policy (NCV 05000285/2006003-02). This violation is in the licensee's corrective action program as CR 200602029.

.2 Annual Fire Drill Observation

a. Inspection Scope

On June 27, 2006, the inspectors observed a fire brigade drill to evaluate the readiness of licensee personnel to prevent and fight fires, including the following aspects: (1) the number of personnel assigned to the fire brigade, (2) use of protective clothing, (3) use of breathing apparatuses, (4) use of fire procedures and declarations of emergency action levels, (5) command of the fire brigade, (6) implementation of pre-fire strategies and briefs, (7) access routes to the fire and the timeliness of the fire brigade response, (8) establishment of communications, (9) effectiveness of radio communications, (10) placement and use of fire hoses, (11) entry into the fire area, (12) use of fire fighting equipment, (13) searches for fire victims and fire propagation, (14) smoke removal, (15) use of pre-fire plans, (16) adherence to the drill scenario, (17) performance of the post-drill critique, and (18) restoration from the fire drill. The licensee simulated a fire in the radioactive waste building. Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

.1 Annual External Flooding

a. Inspection Scope

The inspectors: (1) reviewed the USAR, the flooding analysis, Probabilistic Risk Assessment Summary Notebook and plant procedures to assess seasonal susceptibilities involving external flooding; (2) reviewed the Corrective Action Program to determine if the licensee identified and corrected flooding problems; (3) verified that operator actions for coping with flooding can reasonably achieve the desired outcomes; and (4) walked down the one area listed below to verify the adequacy of: (a) equipment seals located below the floodline and (b) floor and wall penetration seals.

- May 12, 2006, Auxiliary Feed Pump and Instrument Air Compressors Area (Room 19)

Documents reviewed by the inspectors included:

- GM-RR-AE-1002, "Flood Control Preparedness For Sandbagging," Revision 8, dated April 19, 2005
- EPIP-TSC 2, "Catastrophic Flooding Preparations," Revision 6, dated March 3, 2005
- "PRA Summary Notebook," Revision 8, dated February 14, 2006
- AOP-01, "Acts of Nature," Revision 20, dated March 30, 2006
- PE-RR-AE-1001, "Floodgate Installation and Removal," Revision 1, dated January 13, 2005

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07)

Biennial Heat Sink Performance (71111.07B)

a. Inspection Scope

The inspectors reviewed design documents (e.g., calculations and performance specifications), program documents, implementing documents (e.g., test and maintenance procedures), and corrective action documents. The inspectors interviewed chemistry personnel, maintenance personnel, engineers, and program managers.

For heat exchangers directly connected to the safety-related service water system, the inspectors verified whether testing, inspection and maintenance, or the biotic fouling monitoring program provided sufficient controls to ensure proper heat transfer. Specifically, the inspectors reviewed: (1) heat exchanger test methods and test results from performance testing, (2) heat exchanger inspection and cleaning methods and results, and (3) chemical treatments for microfouling and controls for macrofouling.

For heat exchangers directly or indirectly connected to the safety-related service water system, the inspectors verified the: (1) condition and operation consistent with design assumptions in the heat transfer calculations, (2) vibration monitoring controls for the heat exchangers, (3) chemistry controls for heat exchangers indirectly connected to the safety-related service water system, and (4) redundant and infrequently used heat exchangers are flow tested periodically at maximum design flow.

For the ultimate heat sink and its subcomponents, the inspectors reviewed the following requirements: (1) macrofouling controls, (2) biotic fouling controls, and (3) performance tests for pumps and valves.

If available, the inspectors reviewed additional nondestructive examination results for the selected heat exchangers that demonstrated structural integrity.

The inspectors selected heat exchangers that ranked high in the plant specific risk assessment and were directly or indirectly connected to the safety-related service water system. The inspectors selected the following specific heat exchangers:

- AC-1A, AC-1C, and AC-1D, Component cooling water to raw water heat exchangers
- VA-1A, Train A containment cooler
- VA-8B, Train B containment cooler
- Reactor coolant pump seal coolers
- Other miscellaneous coolers serviced by component cooling water

The inspectors reviewed five heat exchangers; therefore, the inspectors completed three of the required two to three samples.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review

a. Inspection Scope

The inspectors observed testing and training of senior reactor operators and reactor operators to identify deficiencies and discrepancies in the training, to assess operator performance, and to assess the evaluator's critique. The training scenario was observed on June 27, 2006. (The specifics of the scenario will not be described here. The simulator exercise was part of a requalification examination and describing the event would reveal it to other operators still in the training cycle). The inspectors compared operator performance against the criteria listed in the simulator scenario document.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

.2 Regional Specialist Periodic Review

a. Inspection Scope

The following inspection activities were performed using Inspection Procedure 71111.11, "Licensed Operator Requalification Program," and 10 CFR 55.46, "Simulation Facilities," as acceptance criteria.

The inspector reviewed the simulator annual performance test book for 2006, using ANS/ANSI 3.5 -1985, "Nuclear Power Plant Simulators for Use in Operator Training and Examination," as committed to by the licensee in their Administrative Procedure SA-03, "Simulator Certification." The inspector also discussed facility operating events with the resident staff. In addition, a sample of core performance test documents were reviewed against the test documents and the Cycle 23 test data from the plant. The simulator was using the Cycle 23 core load for the current training cycle. Because the licensee verbally committed to the inspector that the simulator would not be used for reactivity/control manipulation credits on the next initial operating licensing examination in 2007, the corresponding documents associated with 10 CFR 55.46©)(2) were not reviewed. The purpose of this review was to determine if the simulator was capable of supporting initial examinations and supporting requalification training required for all licensed operators on shift. Documents reviewed during the inspection are listed in the back of this report.

Because the licensee replaced all of the simulator models in February 2006, the inspector assessed the verification and validation process for the new simulator. The model replacements were performed between the training week cycles in order to reduce the impact on the training program. This assessment included discrepancy

logging and classification, post-modification testing, discrepancy closeout, and training updates for the corresponding model replacements.

The inspector interviewed one instructor, two reactor operators, and two senior reactor operators for feedback regarding the fidelity of the simulator, the simulator discrepancy reporting system effectiveness, and training on differences between the simulator and the plant. The inspector also reviewed several program documents that describe the overall simulator program and how management groups, such as how the simulator configuration review group coordinates discrepancy priorities and their subsequent repair decisions (e.g., cost versus training impact). These items were reviewed in order to satisfy the requirements of 10 CFR 55.46(d) for continued assurance of simulator fidelity through problem identification and resolution, proper reporting, root cause evaluations, and a planned schedule for implementing timely corrective actions with proper content.

The inspector ran two transient tests, two malfunction tests, and one scenario in order to verify reasonable model performance based on the current design of the plant and the specified standard reference plant data used for comparison. These tests were: (1) Simultaneous Closure of all Main Steam Isolation Valves-Transient Test Three; (2) Loss of Coolant Accident with Loss of Off-Site Power-Transient Test Eight; (3) Loss of Shutdown Cooling-Malfunction Test Seven; (4) Fuel Clad Failure-Malfunction Test Fourteen, and (5) Station Blackout-Scenario.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed the maintenance activities listed below to: (1) verify the appropriate handling of structure, system, and component (SSC) performance or condition problems; (2) verify the appropriate handling of degraded SSC functional performance; (3) evaluate the role of work practices and common cause problems; and (4) evaluate the handling of SSC issues reviewed under the requirements of the maintenance rule, 10 CFR Part 50, Appendix B, and the Technical Specifications.

- 'A' Circulating Water Cell outage in March 2006
- Coolant Charging Pump CH-1C low flow in March 2006

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed two samples.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors reviewed the four assessment activities listed below to verify: (1) performance of risk assessments when required by 10 CFR 50.65 (a)(4) and licensee procedures prior to changes in plant configuration for maintenance activities and plant operations; (2) the accuracy, adequacy, and completeness of the information considered in the risk assessment; (3) that the licensee recognizes, and/or enters as applicable, the appropriate licensee-established risk category according to the risk assessment results and licensee procedures; (4) the risk management actions selected by the licensee were taken, and (5) the licensee identified and corrected problems related to maintenance risk assessments.

- May 1, 2006, Draining to mid-loop with Blair water outage
- June 5, 2006, Protection of Electrical Switchyard, Electrical Switchgear Rooms, and Diesel Generator 2 while Diesel Generator 1 was out of service for surveillance testing
- June 7, 2006, Auxiliary Feed Water FW-10 Steam Inlet Valve YCV-1045 instrument air filter installation, Component Cooling Water Pump AC-3C breaker preventive maintenance, performance of SE-ST-AFW-3006, “Auxiliary Feedwater Pump FW-10 Steam Isolation Valve, and Check Valve Tests”
- June 12, 2006, Emergent elevated risk condition while potable water supply from Blair, Nebraska, was out of service

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed four samples.

b. Findings

No findings of significance were identified.

1R14 Operator Performance During Nonroutine Evolutions and Events (71111.14)

a. Inspection Scope

The inspectors: (1) reviewed operator logs, plant computer data, and/or strip charts for the below listed evolutions to evaluate operator performance in coping with nonroutine events and transients; (2) verified that operator actions were in accordance with the response required by plant procedures and training; and (3) verified that the licensee has identified and implemented appropriate corrective actions associated with personnel performance problems that occurred during the nonroutine evolutions sampled.

- April 10, 2006, observation of licensee's response to Containment Personnel Access Lock inoperability, Technical Specification 2.0.1 entry and the associated partial down-power

- April 19, 2006, observation of licensee's response to containment spray loss of function and Technical Specification 2.0.1 entry

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed two samples.

b. Findings

Introduction. A Green noncited self-revealing violation of 10 CFR Part 50, Appendix B, Criterion XVI, was identified for the failure to ensure that conditions adverse to quality are promptly identified and corrected. Specifically, a licensed operator and radiation protection technician failed to promptly identify and correct a PAL inner door equalizing valve leakage, a condition adverse to quality that affected containment integrity and resulted in a Technical Specification violation.

Description. On Friday, April 7, 2006, a licensed operator, equipment operator, and radiation protection technician made a series of three containment entries to perform a temporary modification while the reactor was at power. On exiting the containment following the second entry, the licensed operator and radiation protection technician noted that the inner PAL door's equalizing valve was leaking when opening the outer PAL door. They observed the condition when the radiation technician's smears were blown off the step-off pad by the air flow from the leaking equalizing valve. Following a brief conversation about the leakage the licensed operator indicated that he intended to return to the control room following the third containment entry and write a CR documenting the deficient condition.

After returning to the control room the licensed operator completed the temporary modification paper work but did not write a CR or inform the control room supervisor or shift manager of the leaking inner PAL door equalizing valve. Meanwhile, the radiation protection technician informed a supervisor of the condition. The radiation protection supervisor informed the maintenance supervisor of a possible problem with the PAL door in order to alert them but did not provide details. The maintenance supervisor was under the impression that the PAL door seals would need to be worked if the PAL door surveillance test was unsuccessful. Since the test was successful the maintenance supervisor thought no problem existed.

On Monday, April 10, 2006, the licensed operator wrote a CR. The shift manager was informed of the CR and determined that Technical Specification 2.0.1(1) applied since Technical Specification 2.6(1)B.II addressing containment integrity was not met. Technical Specification 2.0.1(1) required the reactor to be shutdown to hot standby in 6 hours if the problem was not corrected. The inner PAL door equalizing valve was successfully repaired and tested prior to completing the shut down. Technical Specification 2.0.1(1) was exited with reactor power stabilized at 96 percent and power ascension commenced.

Analysis. The inspectors evaluated the safety significance of the finding. The performance deficiency was not identifying and promptly correcting the inner PAL door equalizing valve leakage which was a condition adverse to quality. The finding was considered self-revealing since the inner PAL door equalizing valve leakage revealed itself when contamination smears were blown off the step-off pad after opening the outer PAL door. The finding was more than minor since it was associated with the reactor safety cornerstone attribute to maintain functionality of containment. The finding also affected the cornerstone objective by not providing reasonable assurance that the physical design barrier will protect the public from radionuclide releases caused by events when the outer PAL door is open.

Using the Significance Determination Process, Inspection Manual Chapter 0609 Appendix A, the finding affected the barrier cornerstone for an actual bypass of the reactor containment. Since the finding represented an actual open pathway in the physical integrity of the reactor containment, Inspection Manual Chapter 0609 Appendix H, Containment Integrity Significance Determination Process, was used to complete the evaluation.

According to Inspection Manual Chapter 0609, Appendix H, the finding was classified as Type B, since there was no impact on core damage frequency but it did potentially contribute to large/early release frequency. The initial screening determined the finding to be of very low safety significance (Green) since it was not related to a containment SSC defined in Table 4.1. In addition, the finding's leakage pathway was through a small opening and leakage would be less than 100 percent of containment volume per day which was required to screen the finding greater than Green. The finding had crosscutting aspects in the corrective action program component of the problem identification and resolution crosscutting area in that the inner PAL door equalizing valve leakage was not promptly identified and corrected.

Enforcement. Title 10 of CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," states in part that "measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material, and equipment, and nonconformances are promptly identified and corrected." Contrary to the above, on April 7, 2006, a deficiency of the inner PAL door equalizing valve was observed by licensee personnel. However, the observation was not identified, placed into the corrective action program, or promptly corrected until April 10, 2006. This delay in identifying the deficiency required the licensee to enter Technical Specification 2.0.1(1) which required the reactor to be shutdown and placed into hot standby. This violation of Appendix B, Criterion XVI, is being treated as a self-revealing noncited violation, consistent with Section VI.A of the Enforcement Policy (NCV 285/2006003-03.) This violation was entered into the licensee's corrective action program as CR 200601444.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors: (1) reviewed plant status documents, such as, operator shift logs, emergent work documentation, deferred modifications, and standing orders to

determine if an operability evaluation was warranted for degraded components; (2) referred to the USARt and design basis documents to review the technical adequacy of licensee operability evaluations; (3) evaluated compensatory measures associated with operability evaluations; (4) determined degraded component impact on any Technical Specifications; (5) used the Significance Determination Process to evaluate the risk significance of degraded or inoperable equipment; and (6) verified that the licensee has identified and implemented appropriate corrective actions associated with degraded components.

- June 1, 2006, potential for a run-out condition of containment spray pumps based on failure mode of HCV-344, Containment Spray Header Isolation Valve, (CR 200601606)

- June 7, 2006, air supply line to HCV-2898B, Control Room VA Unit VA-46A CCW Outlet Valve, became partially disconnected from air supply riser "BK" affecting all components serviced by the riser (CR200602428)

- June 14, 2006, incorrect containment heat sink calculation & potential for offsite dose effects (CR 200602259)

- June 26, Unsatisfactory performance of SE-ST-FP-0008, “Fire Protection Water Suppression System Flow Test” (CR 200601697)

- June 26, Reactor Vessel Level Monitoring System did not closely track with other indications during drain down to mid-loop (CR 200601842)

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed four samples.

b. Findings

No findings of significance were identified.

1R19 Post-maintenance Testing (71111.19)

a. Inspection Scope

The inspectors selected the post-maintenance test activities listed below for various risk significant systems or components. For each item, the inspectors: (1) reviewed the applicable licensing basis and/or design-basis documents to determine the safety functions; (2) evaluated the safety functions that may have been affected by the maintenance activity; and (3) reviewed the test procedure to ensure it adequately tested the safety function that may have been affected. The inspectors either witnessed or reviewed test data to verify that acceptance criteria were met, plant impacts were evaluated, test equipment was calibrated, procedures were followed, jumpers were properly controlled, the test data results were complete and accurate, the test equipment was removed, the system was properly re-aligned, and deficiencies during

testing were documented. The inspectors also reviewed the USAR to determine if the licensee identified and corrected problems related to post-maintenance testing.

- May 3, 2006, reviewed post-maintenance test for correcting valve operator and/or solenoid air leak on containment purge isolation Valve PCV-742A (WO 00237668-01)

- May 31, 2006, observed post-maintenance test of diesel-driven auxiliary feedwater pump following oil change (WO 00233079-01)

- May 31, 2006, reviewed post-maintenance test for inspecting and replacing Raw Water Pump AC-10D Backup Seal Water Supply Filter AC-22D (WO 00227723-01)

- May 31, 2006, reviewed post-maintenance test for inspecting media and adjusting basket clearance on Raw Water Strainer AC-12B (WO 00227727-01)

- May 31, 2006, reviewed post-maintenance test for replacing Raw Water Strainer AC-12B Backwash Valve AC-2805B (WO 00223659-01)

- June 12, 2006, observed performance of licensee Procedure OP-ST-RW-3002A, following maintenance on HCV-2851, Raw Water Pump AC-10B discharge valve (WO 226267-03)

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed six samples.

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities (71111.20)

a. Inspection Scope

During the shutdown to replace a reactor coolant pump seal, the inspectors reviewed the following risk significant outage activities to verify defense in depth commensurate with the outage risk control plan, compliance with the Technical Specifications, and adherence to commitments in response to Generic Letter 88-17, "Loss of Decay Heat Removal:" (1) the risk control plan; (2) tagging/clearance activities; (3) reactor coolant system (RCS) instrumentation; (4) electrical power; (5) decay heat removal; (6) spent fuel pool cooling; (7) inventory control; (8) reactivity control; (9) containment closure; (10) reduced inventory or midloop conditions; (11) heatup and coldown activities; (12) restart activities; and (13) licensee identification and implementation of appropriate corrective actions associated with outage activities. The inspectors' containment inspections included observations of the containment sump for damage and debris; and supports, braces, and snubbers for evidence of excessive stress, water hammer, or aging.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the USAR, procedure requirements, and Technical Specifications to ensure that the surveillance activities listed below demonstrated that the SSC's tested were capable of performing their intended safety functions. The inspectors either witnessed or reviewed test data to verify that the following significant surveillance test attributes were adequate: (1) preconditioning; (2) evaluation of testing impact on the plant; (3) acceptance criteria; (4) test equipment; (5) procedures; (6) jumper/lifted lead controls; (7) test data; (8) testing frequency and method demonstrated Technical Specification operability; (9) test equipment removal; (10) restoration of plant systems; (11) fulfillment of ASME Code requirements; (12) updating of performance indicator data; (13) engineering evaluations, root causes, and bases for returning tested SSC's not meeting the test acceptance criteria were correct; (14) reference setting data; and (15) annunciators and alarms setpoints. The inspectors also verified that the licensee identified and implemented any needed corrective actions associated with the surveillance testing.

- OP-ST-CCW-3005B - Component Cooling Category A and B Valve Exercise Test (for the C and D valves), Revision 9
- OP-ST-DG-0001 - Diesel Generator 1 Check, Revision 50
- OP-ST-RW-3011 - AC-10B Raw Water Pump Quarterly Inservice Test, Revision 29
- OP-ST-FP-0001C - Fire Protection System Inspection and Test, Revision 17
- OP-ST-RPS-0008 - Reactor Manual Trip Test, Revision 6

Documents reviewed by the inspectors are shown above.

The inspectors completed five samples.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the USAR, plant drawings, procedural requirements, and Technical Specifications to ensure that the temporary modification associated with defeating Annunciator Card CB-20 A15 B3, was properly implemented. The inspectors: (1) verified that the modifications did not have an affect on system operability/availability; (2) verified that the installation was consistent with modification documents; (3) ensured that the post-installation test results were satisfactory and that the impact of the temporary modifications on permanently installed SSC's were supported by the test; (4) verified that the modifications were identified on control room drawings and that appropriate identification tags were placed on the affected drawings; and (5) verified that appropriate safety evaluations were completed. The inspectors verified that the licensee identified and implemented any needed compensatory measures associated with temporary modifications.

Documents reviewed by the inspectors are listed in the attachment.

The inspectors completed one sample.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP2 Alert Notification System Testing (71114.02)

a. Inspection Scope

The inspector discussed with licensee staff the status of the offsite siren system to determine the adequacy of licensee methods for testing the alert and notification system in accordance with 10 CFR Part 50, Appendix E. The licensee's alert and notification system testing program was compared with criteria in NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, Federal Emergency Management Agency (FEMA) Report REP-10, "Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants," and the licensee's current FEMA-approved alert and notification system design report. The inspector also reviewed the references listed in the attachment to this report.

The inspector completed one sample during this inspection.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization Augmentation Testing (71114.03)

a. Inspection Scope

The inspector interviewed members of the emergency planning staff responsible for training and testing of the emergency response organization. The inspector discussed with licensee staff the status of primary and backup systems for augmenting the on-shift emergency response staff to determine the adequacy of licensee methods for staffing emergency response facilities. The inspector reviewed the results of seven quarterly augmentation/notification drills. The inspector evaluated drill performance and training implementation against emergency plan implementation procedures and other documents related to the emergency response organization augmentation system to determine the licensee personnel's ability to staff emergency response facilities in accordance with their emergency plan, Emergency Planning Department Manual (EPDM)-10, "Fort Calhoun Station Training and Qualification Program," Revision 15, and the requirements of 10 CFR Part 50, Appendix E. The inspector also reviewed the references listed in the attachment to this report.

The inspector completed one sample during this inspection.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

.1 February 2006 Changes

a. Inspection Scope

The inspector performed in-office reviews of revisions to the Fort Calhoun Station Emergency Plan, and Revision 39 to Emergency Plan Implementing Procedure OSC-1, "Emergency Classification," both submitted in February 2006. The Emergency Plan changes included Revision 17(a) to Appendix A, "Letters of Agreement," Revision 12 to Section D, "Emergency Classification System," and Revision 12(a) to Section L, "Medical and Public Health Support."

These revisions changed emergency classification level descriptions and revised emergency action levels as described in NRC Bulletin 2005-002, "Emergency Preparedness and Response Actions for Security-Based Events," updated the letters of agreement, and converted the word processing format.

These revisions were compared to their previous revisions, to the criteria of NUREG-0654, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, to Nuclear Energy Institute (NEI) 99-01, "Methodology for Development of Emergency Action Levels," Revision 2, to NRC Bulletin 2005–02, and to the requirements of 10 CFR 50.47(b) and 50.54(q), to determine if the licensee adequately implemented 10 CFR 50.54(q).

This review was not documented in a Safety Evaluation Report and did not constitute approval of licensee changes, therefore these changes are subject to future inspection.

The inspector completed two samples during this inspection.

b. Findings

No findings of significance were identified.

.2 March through May 2006 Changes

a. Inspection Scope

The inspector performed reviews of revisions to the Fort Calhoun Station Emergency Plan submitted from March through May 2006. The Emergency Plan changes included Revision 32 to Section H, "Emergency Facilities and equipment," Revision 18 to Definitions and Abbreviations, and Revision 19 to Section J, "Protective Response."

These revisions incorporated the requirements of 10 CFR Part 72 for dry fuel storage facilities.

These revisions were compared to their previous revisions, to the criteria of NUREG-0654, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants,” Revision 1, to NEI 99-01, “Methodology for Development of Emergency Action Levels,” Revision 2, and to the requirements of 10 CFR 50.47(b), 50.54(q), and 72 to determine if the licensee adequately implemented the revisions.

These reviews were not documented in a Safety Evaluation Report and did not constitute approval of licensee changes, therefore these changes are subject to future inspection.

The inspector completed two samples during this inspection.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

a. Inspection Scope

The inspector reviewed a summary of all CAP documents (CRs) associated with emergency preparedness generated between October 2004 and June 2006 to determine the licensee’s ability to identify and correct problems in accordance with the requirements of 10 CFR 50.47(b)(14) and 10 CFR Part 50, Appendix E. The inspector also reviewed 5 exercise reports: 1 self-assessment, 2 quality assurance audits, 32 specific CRs, and other documents listed in the attachment to this report. Corrective actions were evaluated against the requirements of Standing Order R-2, “Condition

Reporting and Corrective Action," Revision 32, and Fort Calhoun Station Guide (FCSG)-24, "Corrective Action Program Expectations," Revision 9. The inspector also reviewed other documents listed in the attachment to this report.

The inspector completed one sample during this inspection.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

For the two below listed drills and simulator-based training evolutions contributing to Drill/Exercise Performance (DEP) and Emergency Response Organization (ERO) Performance Indicators, the inspectors: (1) observed the training evolution to identify any weaknesses and deficiencies in classification, notification, and Protective Action Requirements (PAR) development activities; (2) compared the identified weaknesses and deficiencies against licensee identified findings to determine whether the licensee is properly identifying failures; and (3) determined whether licensee performance is in accordance with the guidance of the NEI 99-02, "Voluntary Submission of Performance Indicator Data," acceptance criteria.

- April 25, 2006, drill scenario that involves loss of off-site power, anticipated transient without scram, contaminated injured person, large break loss of coolant accident, instrument air header rupture, and high pressure safety injection line break in the auxiliary building.

- June 27, 2006, drill scenario that involves fire in the radwaste processing building, contaminated fire brigade member with heat exhaustion, uncontrolled heat extraction of steam generator RC-2A, anticipated transient without scram, high containment pressure ruptures pipe in auxiliary building, and de-energized 480 volt bus 1B3B.

Documents reviewed by the inspectors are included in the attachment to this report. The inspectors completed two samples.

b. Findings

No findings of significance were identified.

## 4. OTHER ACTIVITIES

### 4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

Cornerstone: Mitigating Systems

The inspectors sampled licensee submittals for the performance indicator listed below for the period from April 1, 2004, through March 31, 2006. The definitions and guidance of NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 2, were used to verify the licensee's basis for reporting each data element in order to verify the accuracy of performance indicator data reported during the assessment period. The inspectors reviewed licensee event reports, out-of-service logs, operating logs, and the maintenance rule database as part of the assessment.

- Safety System Functional Failures

Cornerstone: Barrier Integrity

The inspectors sampled licensee submittals for the two performance indicators listed below for the period from April 1, 2004 through March 31, 2006. The definitions and guidance of NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 2, were used to verify the licensee's basis for reporting each data element in order to verify the accuracy of performance indicator data reported during the assessment period. The inspectors: (1) reviewed RCS chemistry sample analyses for dose equivalent Iodine-131 and compared the results to the Technical Specification limit; (2) reviewed operating logs and surveillance results for measurements of RCS identified leakage; and (3) observed a surveillance test that determined RCS identified leakage.

- Reactor Coolant System Specific Activity
- Reactor Coolant System Leakage

Cornerstone: Emergency Preparedness

The inspector reviewed licensee evaluations for the three emergency preparedness cornerstone performance indicators of DEP, EROrganization Participation, and Alert and Notification System Reliability, for the period from October 1, 2005, through March 31, 2006. The definitions and guidance of NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 3, and EPDM-14, "Emergency Preparedness Performance Indicator Program," Revision 6, were used to verify the accuracy of the licensee's evaluations for each performance indicator reported during the assessment period.

The inspector reviewed a 100 percent sample of drill and exercise scenarios and licensed operator simulator training sessions, notification forms, and critique records associated with training sessions, drills, and exercises conducted during the verification period. The inspector reviewed the qualification, training, and drill participation records for a sample of 10 emergency responders. The inspector reviewed alert and notification

system testing procedures, maintenance records, and a 20 percent sample of siren test records. The inspector also reviewed other documents listed in the attachment to this report.

The inspector completed 3 samples during the inspection.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

The inspectors chose issues (two inspection samples) for more in-depth review to verify that the licensee personnel had taken corrective actions commensurate with the significance of the issue. The inspectors reviewed the corrective actions associated with these conditions. The following issues were evaluated:

- June 21, 2006: review of CR 200602025 (Out of Tolerance on Time Overcurrent for Diesel Generator 1 Relays)

- June 28, 2006: review of CR 200504973 (Difference in heights of active fuel and Boral panels in the spent fuel fool racks)

b. Findings

No findings of significance were identified.

.2 Semiannual Trend Review

a. Inspection Scope

The inspectors performed a semiannual assessment (one inspection sample) of the licensee's corrective action program. The assessment covered Level 4 CRs written in the fourth quarter of 2004. The Level 4 CR category represents conditions adverse to quality where immediate corrective actions completed do not address the condition and implies that additional corrective action is needed. The inspectors focused on equipment issues and human performance issues to determine if the licensee had an understanding and awareness of trends in conditions adverse to quality. The inspectors used human performance categorization guidance found in Inspection Manual Chapter 0305.

b. Findings

No findings of significance were identified.

.3 Annual Sample Review

a. Inspection Scope

The inspector selected 32 CRs (corrective action program inputs) for detailed review based on their linkage with event classification, notification of offsite authorities, and processes for providing protective action recommendations. The CRs were reviewed to ensure that the full extent of the issues were identified, an appropriate evaluation was performed, and appropriate corrective actions were specified and prioritized. The inspector evaluated the CRs against the requirements of Standing Order R-2, "Condition Reporting and Corrective Action," Revision 32.

b. Findings and Observations

No findings of significance were identified.

.4 Crosscutting Issue Aspects

The inspectors identified two findings with problem identification and resolution crosscutting aspects. As described in Section 1RO1, licensee personnel repeatedly failed to identify material in the protected area that had the potential to become a missile in high wind conditions. In Section 1R14, licensee personnel failed to promptly identify and correct a PAL inner door equalizing valve leak.

4OA3 Event Follow-up (71153)

.1 (Closed) Licensee Event Report (LER) 05000285/2005001-00, Unplanned Reactor Trip Due to a Feedwater Transient at Low Power During Plant Shut-down

Introduction. A Green self-revealing finding was identified for inadequate operator control of plant parameters, which resulted in the unplanned tripping of the reactor during testing.

Description. On February 26, 2005, operations personnel lowered reactor power to 12 percent, tripped the turbine and were conducting turbine testing. Twenty-five minutes later, at 9:25 p.m. steam generator levels became erratic and the Control Room Supervisor directed the Reactor Operator to take manual control of HCV-1105/-1106, Steam Generator RC-2A/2B Feedwater Regulating Bypass Valves. At 9:33 p.m., the Reactor Operator opened HCV-1105 and began filling Steam Generator A to raise level. At 9:34 p.m., decreasing reactor coolant temperature caused pressurizer level and pressure to lower and an accompanying power increase and the reactor tripped on a loss of load. (This function trips the reactor if two or more of four main steam stop valves are closed in conjunction with power level exceeding 15 percent). Licensed operators responded to the event by promptly following Emergency Operating Procedure, EOP-00, "Standard Post Trip Actions," Revision 17. All other plant equipment responded as designed. Refer to NRC Inspection Report 05000285/2005002, Section 1R14 for a more detailed description of the sequence of events.

The licensee's investigation determined the cause to be "Control board operator performance errors related to control of RCS temperature and steam generator level. The performance errors included (1) establishing too high of a feed rate to the steam generators immediately following placement of the feedwater flow controls into manual operation, and (2) not maintaining steam dump/bypass temperature control stable while at low power conditions."

No new findings were identified in the inspector's review.

Analysis. The failure to adequately control the operation of the reactor at low power conditions was a performance deficiency. The finding was greater than minor because it had an actual impact of tripping the reactor, which is a precursor to a more significant event. The performance deficiency was also similar to Example 4.b in Inspection Manual Chapter 0612, Appendix E. The finding, which is under the Initiating Events cornerstone, was of very low safety significance because it did not contribute both to the likelihood of a reactor trip and that mitigation equipment would not be available. The cause of the finding is related to the crosscutting element of human performance in that the operator's performance directly led to the plant transient.

Enforcement. The inspectors determined that the governing operating procedures had been used successfully during previous shutdowns of the plant. Therefore no inadequate procedure existed or a failure to identify a condition adverse to quality and consequently no violation of regulatory requirements was identified. This issue has been entered into the licensee's Corrective Action Program as CR 200500773: Finding (FIN) 05000285/2006003-04, Reactor Trip Caused by Inadequate Operator Control During Low Power Operation. LER 05000285/2005001-00 is closed to this finding.

.2 (Closed) LER 05000285/2006001-00, Failure to Report Inoperable Containment Air Lock Valve Violates Technical Specifications

On April 7, 2006 a self-revealing PAL inner door equalizing valve leak was discovered but not documented until April 10, 2006. Due to the delay in reporting the deficiency to the control room, the leaking equalizing valve caused a Technical Specification for containment integrity to be violated. This required application of the technical specification requiring a reactor shutdown. The valve was repaired prior to completing the shutdown and the plant was returned to 100 percent power. The details of the event, analysis of significance, and enforcement are discussed Section 1R14. This LER is closed.

4OA5 Other Activities

.1 Implementation of Temporary Instruction (TI) 2515/165 Operational Readiness of Offsite Power and Impact on Plant Risk

a. Inspection Scope

The objective of TI 2515/165, "Operational Readiness of Offsite Power and Impact on Plant Risk," is to gather information to support the assessment of nuclear power plant

operational readiness of offsite power systems and impact on plant risk. During this inspection, the inspectors interviewed licensee personnel, reviewed licensee procedures, and gathered information for further evaluation by the Office of Nuclear Reactor Regulation.

b. Findings

No findings of significance were identified.

4OA6 Meetings

Exit Meeting Summary

On April 10, 2006, the inspector conducted a telephonic exit meeting to present the emergency preparedness change review inspection results to Mr. C. Simmons, Supervisor, Emergency Planning, who acknowledged the findings. The inspector confirmed that proprietary information was not provided or examined during the inspection.

The inspectors discussed the results of the heat sink inspection to Mr. D. Bannister, Plant Manager, and other members of licensee management on May 19, 2006. The inspectors returned proprietary information examined during the inspection to the licensee. Licensee management acknowledged the inspection results.

The inspectors discussed the results of the in-office review of licensee-identified fire protection findings with Mr. Jeff Reinhart, Site Director, and other members of licensee management on May 30, 2006. Licensee management acknowledged the inspection results. The inspectors destroyed any proprietary information reviewed following the exit meeting.

On June 22, 2006, the inspector conducted an exit meeting to present the licensed operator requalification simulator inspection results to Mr. D. Bannister, Plant Manager, who acknowledged the findings. The inspector confirmed that proprietary information was not provided or examined during the inspection.

The inspector presented the emergency preparedness program baseline inspection results to Mr. D. Bannister, Plant Manager, and other members of licensee management at the conclusion of the inspection on June 22, 2006. The licensee acknowledged the findings presented. The inspector verified no proprietary information was discussed during the inspection.

The results of the resident inspector activities were presented to Mr. Jeff Reinhart, Site Director, and other members of licensee management on July 7, 2006. The inspectors confirmed that proprietary information examined during the inspection period was returned to the licensee. Licensee management acknowledged the inspection findings.

4OA7 Licensee-Identified Violations

The following violations of very low safety significance (Green) were identified by the licensee and are violations of NRC requirements, which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as NCV.

- License Condition 2.D and the Updated Safety Analysis Report requires the implementation of administrative policies for the Fire Protection Program, which includes a fire brigade training program. The fire brigade training program requires that fire brigade members conduct drills as if it were an actual emergency. Contrary to this, from the first Quarter 2005 through the first Quarter 2006, the licensee "pre-staged personnel" to ensure that fire brigade response times met the evaluation criteria. The licensee entered this deficiency into their corrective action program as CR 200601976. This finding is of very low safety significance because it did not result in any response times being exceeded nor did a poor response to an actual fire occur.

- Technical Specification 5.8.1.c requires, in part, that written procedures shall be established and maintained for implementation of the fire protection program. Procedures SO-G-102, "Fire Protection Program Plan," Revision 6 was the governing document for all fire protection program plan implementing procedures and references Procedure SO-G-103, "Fire Protection Operability Criteria and Surveillance Requirements," Revision 20, which implements fire protection requirements. Procedure SO-G-103, Attachment 7.5, requires, in part, that all fire barriers protecting safety-related areas shall be functional. Contrary to the above, the licensee failed to ensure that the fire barrier protecting safety-related Rooms 18 and Corridor 4 were functional in that an extension cord through the fire damper would have inhibited its function. The licensee entered this deficiency into their corrective action program as CR 200601158. This finding is of very low safety significance due to the fact that no redundant equipment existed in the two affected fire areas.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

Licensee Personnel

D. Banister, Plant Manager
W. Blessie, Supervisor, Operations Engineering
G. Cavanaugh, Supervisor, Regulatory Compliance
L. Church, System Engineer
A. Clark, Fire Brigade Training Coordinator
M. Core, Manager, System Engineering
H. Faulhaber, Division Manager, Nuclear Engineering
M. Frans, Assistant Plant Manager
S. Gebers, Manager, Health Physics and Emergency Planning
W. Gooodell, Nuclear Training manager
D. Guinn, Licensing Engineer
R. Haug, Manager, Radiation Protection
J. Herman, Manager, Engineering Programs
G. Labs, Simulator Supervisor
D. Lakin, Manager, Corrective Action Group
E. Matzke, Licensing Engineer
J. McManis, Manager, Licensing
R. Meng, Emergency Preparedness
M. Quinn, Nuclear Engineering and Computing Projects Supervisor
J. Reinhart, Site Director
C. Simmons, Supervisor, Emergency Planning
D. Spires, Manager, Work Management
S. Straub, ECP Coordinator
M. Tesar, Division Manager, Nuclear Support Services
D. Weaver, Operations and Technical Training Supervisor

NRC

L. Smith, Chief, Engineering, Branch 2

### LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

| | | |
|---|---|---|
| 05000285/2006003-01 | NCV | Failure to Identify Potential Missiles During Adverse Weather Conditions (Section 1R01) |
| 05000285/2006003-02 | NCV | Non-Functional Fire Barrier Separating Corridor 26 (Fire Area 20.1) and Room 61 (Fire Area 20.4) (Section 1R05) |

| | | |
|---|---|---|
| 05000285/2006003-03 | NCV | Failure to Identify a Condition Adverse to Quality Associated with an Inoperable Personnel Access Lock (Section 1R14) |
| 05000285/2006003-04 | FIN | Reactor Trip Caused by Inadequate Operator Control During Low Power Operation (Section 4OA3) |

Closed

| | | |
|---|---|---|
| 05000285/2005001-00 | LER | Unplanned Reactor Trip Due to a Feedwater Transient at Low Power During a Plant Shutdown (Section 4OA3.1) |
| 05000285/2006001-00 | LER | Failure to Report Inoperable Containment Air Lock Valve Violates Technical Specifications (Section 4OA3.2) |

## LIST OF DOCUMENTS REVIEWED

### Section 1RO1: Adverse Weather

E-mail from John Borger, Shift Manager to John Hanna, Senior Resident Inspector, dated April 9, 2006

E-mail from Bryon Miller, Warning Coordination Meteorologist, NOAA to Leonard Willoughby, Resident Inspector, dated June 28, 2006

Engineering Assistance Request 94-007, “Missile Hazzards Related to Offsite Power Losses,” Revision 1

Design Basis Document PLDBD-CS-50, “External Missiles,” Revision 5

Control Room Operations logs from June 16, 2006

CRs:

| | | | |
|---|---|---|---|
| 200602454 | 200601562 | 200602458 | 200601480 |

### Section 1RO4: Equipment Alignments

Licensee Procedure OI-DG-1, “Diesel Generator No. 1,” Revision 42

Licensee Procedure OI-AFW-1, “Auxiliary Feedwater Actuation System Normal Operation,” Revision 61

Drawing E-4144, “FW-10 Lube Oil Schematic P&ID,” Revision 6

Drawing 11405M254, Sheet 2, “Flow Diagram Condensate P&ID,” Revision 34

Drawing 11405M253, Sheet 1, “Flow Diagram Steam Generator Feedwater and Blowdown P&ID,” Revision 87

Drawing 11405M253, Sheet 4, “Flow Diagram Steam Generator Feedwater and Blowdown P&ID,” Revision 34

**Section 1RO5: Fire Protection**

CR 200601158
Licensee Abnormal Operating Procedure, Section XIX, “Fire in Room 69,” Revision 15
Licensee Procedure SO-G-28, “Station Fire Plan,” Revision 64
Engineering Analysis EA-FC-97-001, “Fire Hazards Analysis (FHA) Manual,” Revision 11

**Section 1R07: Biennial Heat Sink Inspection**

Procedures

CH-AD-0048, “Environmental Inspection for Biofouling Organisms,” Revision 2

CH-ST-RV-0004, “Environmental Sample Collection - Sediment,” Revision 6

IC-ST-VA-0013, “Verification of Containment Air Cooling and Filtering Units Flow and Pressure Drop,” Revision 9

NOD-PP-N3, “Strategic Water Plan,” Revision 1

OI-CC-1, “Component Cooling System Normal Operation,” Revision 52

OI-RW-1, “Raw Water System Normal Operation,” Revision 70

OP-ST-RW-3002A, “Raw Water System Category A and B Exercise Test,” Revision 10

OP-ST-RW-3002B, “Raw Water System Category A and B Exercise Test,” Revision 4

Operability Evaluation SAO 2004-001, May 21, 2004

PED-SEI-16, “Evaluation of Heat Exchanger Performance,” Revision 8

SE-PFT-CCW-0001, “Component Cooling Water Heat Exchangers Performance Test,” Revision 12

Drawings

L001591, “Assembly - Pump Cover and Rotating Element,” Revision 0

Calculations

EAR 95-066, “Uncertainty Analysis for the Heat Exchanger Testing Program,” dated April 4, 1997

EAR 96-032, “Evaluation of CCW Heat Exchangers Post-DBA Performance With 5% Plugged Tubes,” dated December 9, 1996

EAR 27057, “Uncertainty Analysis for the Heat Exchanger Testing Program Based on Installed Temperature Loop Uncertainties,” dated June 15, 1999

Surveillance Tests

PD04478, “Eddy Current Inspection of Component Cooler AC-1B,” dated January 27, 2002

PD04485.01, “Eddy Current Inspection of Component Cooler AC-1A,” dated May 3, 2002

PD04692.01, “Eddy Current Inspection of Letdown Heat Exchanger CH-7,” dated March 7, 2005

PD04692.06, “Eddy Current Inspection of Reactor Coolant Pump Motor Upper Bearing Lube Oil Cooler Bundles RC-3A-M-LO-1 and RC-3C-M-LO-1,” dated March 24, 2005

PD04692.07, “Eddy Current Inspection of Spent Fuel Cooler AC-8,” dated March 21, 2005

PD04692.08, “Eddy Current Inspection of Shut-down Cooling Heat exchangers HX AC-4A and AC-4B,” dated March 26, 2005

PD04771.1, “Eddy Current Inspection of Component Cooler AC-1D,” dated December 9, 2005

PD04771.2, “Eddy Current Inspection of Component Cooler AC-1C,” dated December 17, 2005

Work Orders

| | | | | | |
|---|---|---|---|---|---|
| 00213697-01 | 00217443-01 | 00227403-01 | 00225164-01 | 00227405-01 | 00227406-01 |
| 00219357-01 | | | | | |

Corrective Action Documents

| | | | | | |
|---|---|---|---|---|---|
| 199600281 | 200101265 | 200103737 | 200200205 | 200202989 | 200203931 |
| 200300771 | 200304248 | 200305198 | 200305760 | 200400007 | 200400928 |
| 200401065 | 200401265 | 200401516 | 200401753 | 200401754 | 200401758 |
| 200401761 | 200401885 | 200401940 | 200402501 | 200402617 | 200402917 |
| 200403340 | 200403457 | 200403566 | 200403798 | 200404037 | 200500018 |

| | | | | | |
|---|---|---|---|---|---|
| 200500123 | 200501644 | 200501760 | 200501762 | 200502024 | 200502270 |
| 200502330 | 200502443 | 200502469 | 200503431 | 200503650 | 200503764 |
| 200504287 | 200504382 | 200504425 | 200504460 | 200504522 | 200504867 |
| 200505399 | 200505544 | 200505616 | 200505643 | 200505670 | 200505736 |
| 200601197 | 200601409 | 200601606 | 200601901 | | |

Miscellaneous

EPRI NP-7552, “Heat Exchanger Performance Monitoring Guidelines,” December 1991

Updated Final Safety Analysis Report, Sections 9.7, “Component Cooling Water System,” and 9.8, “Raw Water System”

Generic Letter 89-13, “Service Water System Problems Affecting Safety-Related Equipment,” July 18, 1989

Generic Letter 89-13, Supplement 1, “Service Water System Problems Affecting Safety-Related Equipment,” April 4, 1990

Letter LIC-90-0050, “Response to Generic Letter 89-13,” dated January 26, 1990

Letter LIC-91-082, “Implementation of Performance Testing for Component Cooling Water (CCW) Heat Exchangers (HX),” dated March 20, 1981

Letter LIC-92-330, “Generic Letter 89-13, Service Water System Problems Affecting Safety-Related Equipment - Confirmation of Completion of Recommended Actions,” dated November 16, 1992

Memorandum EOS-SYE-98-062, “Performance Monitoring of Heat Exchangers in Response to Generic Letter 89-13,” dated March 31, 1998

Letter LIC-02-0121, “10 CFR 50.59 Report and Updated Safety Analysis Revision for Fort Calhoun Station,” Attachment 2, pp 3 & 4,dated November 15, 2002

Inspection Report 50-285/91-02, dated February 4, 1991

Quarterly raw water and component cooling water inservice test program trend data from 2004 through April 2006

Raw Water System Training Manual

Component Cooling Water System Training Manual

Component Cooling Water Heat Exchanger Vendor Manual and TEMA Sheet

Alternate Spent Fuel Pool/Raw Water - CCW Maintenance Outage Scoping Document

CCW and RW System Health Reports - 2nd Quarter 2005 through 1st Quarter 2006

Pump Relief Request E4 from IST Program 4th Interval, Revision 2

Apparent Cause Analysis - Containment Spray Outside Design Basis

**Section: 1R11 Licensed Operator Requalification Program**

Open Simulator Discrepancy Reports (All)
Closed Simulator Discrepancy Reports Summary from January 2006 thru May 2006
Simulator Configuration Review Group (SCRG) meeting minutes for 2005
Simulator Annual Performance Test book for 2006
Simulator Steady State Testing Packages for 100% and 30% Power
Simulator Transient Testing Packages for Tests Three, Eight, and Ten
Current Simulator Differences List
Core physics testing packages for simulator, Cycle 23.
Low Power Physics Test data from the plant, Cycle 23.
Simulator Modification Procedures
Verification and Validation Procedures
Operator licensing tracking system active operator licenses (R4 OLTS report)
Current operator license list from Fort Calhoun Station

**Section 1R12: Maintenance Effectiveness**

Maintenance Rule Expert Technical Panel Meeting Minutes dated June 1, 2006

**Section 1R13: Maintenance Risk Assessments and Emergent Work Control**

Plan of the Day Status Sheet for June 7, 2006
CR 200602440
Licensee Procedure OPD-6-08, "Plastic Label Usage," Revision 7
Licensee Procedure SOM-100, "Conduct of Maintenance," Revision 40

**Section 1R14: Operator Performance During Nonroutine Evolutions and Events**

CR 200601606

White Paper "Evaluation of Single Failure Criteria as Applied to 480 Volt Bus 1B4B," dated May 31, 2006

Licensee Event Report 05000285/2006-001, "Failure to Report Inoperable Containment Air Lock Valve Violates Technical Specifications"

**Section 1R15: Operability Evaluations**

White Paper "Evaluation of Single Failure Criteria as Applied to 480 Volt Bus 1B4B" dated May 31, 2006

Event Notification 42512, dated April 19, 2006

Control Room Operator Logs from April 19, 2006

Drawing Number 11405-E-51, "Containment Spray Control Valve HCV-344," Revision 29

CR 200602259

**Section 1R19: Post-Maintenance Testing**

Licensee Procedure OP-PM-AFW-0004, "Third Auxiliary Feedwater Pump Operability Verification," Revision 27

Licensee Procedure OI-AFW-4, "Auxiliary Feedwater Startup and System Operation," Revision 60

Control Room Operator Logs from May 31, 2006

CR 200602338

**Section 1R23: Temporary Plant Modifications**

USAR Section 8.1, "Electrical Systems," Revision 4
Plant Modification Screening Form FC-15A dated May 28, 2006
Annunciator Response Procedure ACP-CB-20/A-15, Revision 32
Abnormal Operating Procedure, "Loss of Instrument Bus Power," Revision 9

**Section: 1EP2 Alert Notification System Testing (71114.02)**

Fort Calhoun Station Emergency Plan, June 15, 2006

Emergency Preparedness Test Procedures (EPT):

EPT-1, "Alert Notification System Silent Test," Revision 14

EPT-2, "Alert Notification System Growl Test," Revision 18

EPT-3, "Alert Notification Complete Cycle Test," Revision 13

Siren Test results from October 2005 through March 2006

Emergency Plan Implementing Procedure (EPIP) EOF-24, "EOF Backup ANS Activation," Revision 4

Fort Calhoun Station Alert and Notification System Design Report

**Section: 1EP3 Emergency Response Organization Augmentation Testing (71114.03)**

EPT-34, "Perform Augmentation or Notification Drill," Revision 26

EPDM-07, "Maintenance of the Emergency Response Organization Database," Revision 4

EPDM-09, "Use and Maintenance of the Interactive Notification System Database," Revision 2

EPDM-10, "FCS Emergency Response Organization (ERO) Training and Qualification Program," Revision 15

Quarterly Notification Drill Records:

November 15, 2005 Notification Test

March 14, 2005, Notification Test

**Section: 1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)**

EPDM-6, "10 CFR 50.54(q) Review of Procedure Changes," Revision 4

EPDM-14, "Emergency Preparedness Performance Indicator Program," Revision 6

**Section: 1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)**

CRs:

| | | | | |
|---|---|---|---|---|
| 2002-03955 | 2005-00289 | 2005-04622 | 2006-00660 | 2006-01085 |
| 2003-05696 | 2005-00491 | 2005-04900 | 2006-00723 | 2006-01245 |
| 2004-00491 | 2005-00491 | 2005-05195 | 2006-00770 | 2006-01819 |
| 2004-03137 | 2005-03769 | 2005-05619 | 2006-00832 | 2006-02051 |
| 2004-03420 | 2005-04092 | 2005-05693 | 2006-00834 | 2006-02077 |
| 2004-04420 | 2005-04133 | 2005-05870 | 2006-00835 | 2006-02211 |
| 2005-00111 | 2005-04133 | 2006-00608 | 2006-01082 | 2006-02640 |
| 2005-00287 | 2005-04137 | 2006-00609 | 2006-01083 | 2006-02667 |
| 2005-00287 | 2005-04330 | | | |

Quality Assurance Audit Reports 05-QUA-021, March 10, 2005 and 06-QUA-029, May 15, 2006

Engineering Change 29426

Work Order 00123839

EPIP-EOF-6, "Dose Assessment," Revision 34

EPIP-TSC-1, “Activation of the Technical Support Center,” Revision 27

Abnormal Operating Procedure AOP-37, “Security Events,” Revision 7

SO-R-1, “Reportability Determinations,” Revision 15

**Section 1EP6: Drill Evaluation**

Emergency Planning Drill Scenario dated April 25, 2006

Emergency Planning Drill Scenario dated June 27, 2006

EPIP-OSC-1, “Emergency Classification,” Revision 40 dated April 4, 2006

EOP-00, “Standard Post Trip Actions,” Revision 18 dated September 18, 2005

EOP-05, “Loss of Coolant Accident,” Revision 31 dated April 29, 2006

EOP-20, “Functional Recovery Procedure,” Revision 18 dated April 29, 2006

EOP-05, “Uncontrolled Heat Extraction,” Revision 18 dated September 5, 2003

**Section 4OA1: Performance Indicator Verification**

Performance Indicator Data from April 1, 2004, through March 31, 2006 for Reactor Coolant System Activity, Reactor Coolant System Leakrate, and Functional Failures

EPIP-EOF-7, “Protective Action Guidelines,” Revision 17

EPDM 04, “Conduct of Drills,” Revision 10

Emergency Exercise Reports:

October 31, 2005; December 6, 2005; March 7, 2006; April 25, 2006; May 23, 2006

**Section 4OA3: Event Follow-up**

CR 200500773

Licensee Procedure OPD-4-19, “Reactivity Management,” Revision 10

Licensee Procedure OI-FW-3, “Steam Generator Level Control,” Revision 12

Licensee Procedure OI-ST-2, “Turbine Generator Startup,” Revision 20

Licensee Procedure OI-ST-3, “Turbine Generator Shutdown,” Revision 15

Licensee Procedure OI-ST-10, “Turbine Tests,” Revision 39

Licensee Procedure OP-4, “Load Change and Normal Power Operation,” Revision 31

**Section 4OA7: Licensee-Identified Violations**

CRs

| | | | | | |
|---|---|---|---|---|---|
| 200400847 | 200401075 | 200404294 | 200503233 | 200504836 | 200600875 |
| 200400850 | 200402206 | 200503080 | 200503865 | 200505495 | |

Miscellaneous

Fire Brigade Training Master Plan, Revision 8
NEIL Comprehensive Report, dated March 31, 2004
NEIL Comprehensive Report, dated October 14, 2005
NFPA 27, “Private Fire Brigades,” 1981 Edition
NFPA 600, “Industrial Fire Brigades,” 1992 Edition
Procedure SO-G-28, “Station Fire Plan,” Revision 64

**LIST OF ACRONYMS**

| | |
|---|---|
| CAP | Corrective action program |
| CFR | *Code of Federal Regulations* |
| CR | Condition report |
| DEP | Drill/Exercise performance |
| ERO | Emergency response organization |
| LER | Licensee Event Report |
| NCV | Noncited violation |
| NEI | Nuclear Energy Institute |
| NRC | Nuclear Regulatory Commission |
| PAL | Personnel Access Lock |
| RCS | Reactor coolant system |
| SSC | Structure, system and component |
| USAR | Updated Safety Analysis Report |